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TAGS: [AORC](#) [ENRG](#) [IAEA](#) [KNNP](#) [TRGY](#)  
SUBJECT: IAEA/SAFEGUARDS: U.S. CONSULTANT DEVELOPS  
METHODOLOGY FOR STATE-LEVEL APPROACH TO ASSESS INDUSTRIAL  
INFRASTRUCTURES RELEVANT TO THE NUCLEAR FUEL CYCLE

REF: A. UNVIE VIENNA 197  
[1](#)B. UNVIE VIENNA 316  
[1](#)C. UNVIE VIENNA 334

Classified By: CDA Geoffrey R. Pyatt for reasons 1.4 b and d

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Summary  
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[1](#)1. (C) Joyce (Ceil) van Berkel, a Sandia National Laboratories retiree and former U.S. cost-free expert to IAEA, carried out a two-week consultancy at the IAEA to help develop an analytic methodology for assessing a State's industrial infrastructure that could be applicable to the nuclear fuel cycle. The consultancy, funded as part of the U.S. Program for Technical Assistance to IAEA Safeguards (POTAS), supported the Division of Safeguards Information Management's (SGIM) efforts to provide analytic input to the IAEA's evolving state-level approach and assessment on drawing safeguards conclusions. Van Berkel produced a draft methodology to assist SGIM analysts assigned to update and maintain state files and State Evaluation Reports (SERs). A follow-on visit by van Berkel will likely be requested by the IAEA so that she can finish work related to extending the methodology for dual-use equipment and materials. Comment: This work is one more example of U.S. support to IAEA safeguards analysis that is propelling the Agency's evolution toward an effective investigative, state-level approach to assuring the absence of undeclared activities in states with comprehensive safeguards agreements. End comment and summary.

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Industrial Infrastructure Assessment Methodology Development  
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[1](#)2. (C) Van Berkel carried out the SGIM consultancy in June [1](#)2009. This was the sixth such consultancy to take place since the U.S. Support Program to IAEA Safeguards (USSP) and the IAEA reactivated their longstanding umbrella task on "Consultant Assistance on Information Collection and on Information Systems" (USSP Task D.137) last year (see also reftels - NOTAL). Per the original IAEA request, van Berkel's consultancy focused on development of a methodology for SGIM analysts to use in order to review and assess industrial infrastructure in East Asian States. Malaysia was selected by SGIM to use as a test case for purposes of developing the methodology. Per standing guidance, Mission briefed van Berkel in advance on the importance of adhering to the agreed scope of work and advising Mission of any additional requests.

[1](#)3. (C) Per the IAEA's 2008 request, van Berkel was to develop a methodology which would be applicable to all states and which focused on the industrial infrastructure required

to produce technology and equipment especially designed for nuclear fuel cycle facilities and activities. (Comment: This work requires a diverse technical background with an emphasis on fuel cycle technologies, knowledge of IAEA Safeguards State Evaluation processes and goals, and information management skills. Since few IAEA staff meet all these criteria, the task is well-suited for a consultancy. End Comment.) Van Berkel produced a draft methodology and list of recommendations for improving the SGIM Information Analysis Unit,s (IAU) capabilities for conducting the assessments, as well as a list of factors which would be used to evaluate Safeguards Department assessment priorities.

¶4. (C) Van Berkel,s draft methodology assumes that the SGIM task officer would be familiar with what is already known about a state from previous IAEA state file collections and State Evaluation Reports related to industrial infrastructure. The task officer would select an approach to the assessment that is based on whether or not a state file is being updated, what is found during a search for indicators of nuclear-related activities, the extent of declared nuclear fuel cycle activities in the state, and Safeguards Department priorities for the assessment. For each of these cases, the methodology prescribes the general approach to be taken.

¶5. (C) SGIM officers and van Berkel planned follow-on activities before she departed Vienna. First, SGIM officers will review and evaluate the draft methodology for assessing industrial infrastructure. SGIM then plans to send the USSP a task extension request to complete the methodology and extend it to dual-use equipment and materials, as specified in the Annex to INFCIRC/254 part 2. It is anticipated that

this follow-on effort will require a four-week visit by van Berkel.

¶6. (C) Van Berkel stated that many analysts in SGIM have political science backgrounds and rely on tutorials and training to augment their technical understanding. She observed that there was good morale in SGIM, a big change from two years ago.

¶7. (C) Comment. The methodology van Berkel is developing is an important piece of the work Safeguards is undertaking to build sturdy and reliable processes for conducting state evaluations, an ongoing effort. MsnOffs have been told by the Section Head of Safeguards Training that the state evaluation system is still not mature enough for incorporation into routine training for inspectors and analysts. The technical consultancies described in reftels help to elevate the technical understanding of IAU staff and the skills they need to perform competent assessments. A side benefit to these consultancies is that they provide a window for seeing in greater detail some of the issues the Secretariat is working and also measuring its progress. End Comment.  
PYATT